

Work Order ID 61009

August 4, 2010 8:55:47 AM



Page 1

Item ID: D4149-1

Accept



Setup Start



Revision ID:

Item Name: Crosstube Lug Plate, Aft

Stop



Start Date: 8/04/10 Start Qty: 10.00



Cust Item ID:

Required Date: 8/11/10 Req'd Qty: 10.00



Customer:

Reference:

Approvals:

Process Plan: H

Date: 10-8-4 Tooling:

Date:

Run Start



QC:

Date: SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D4149

B

100

0.00



Waterjet

Memo

0.00

FLOW CNC Waterjet

Cut as per dwg D4149

Prog Rev: B

Dwg Rev: B

304 .125

Deburr as required

HS 10-8-9

⑪

110

QC2- Inspect parts off machine FAI/FAIB

0.00



QC

Memo

0.00

Quality Control

FB10-8-9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 61009

August 4, 2010 8:55:47 AM



Page 2

Item ID: D4149-1

Accept



Setup Start



Revision ID:

Stop



Item Name: Crosstube Lug Plate, Aft

Start Date: 8/04/10 Start Qty: 10.00



Cust Item ID:

Required Date: 8/11/10 Req'd Qty: 10.00



Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

120

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

8/06/09

410

Pro →

150

Identify as per dwg & Stock Location: 123

0.00



Packaging

Memo

0.00

Packaging

10/8/10

sl

Ⓟ

160

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

10/08/10

MF

10-8-10

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
10/01/09	#120	Per change Took qty +1 For QC inspection template	S	10/06/09	+1		S 10/06/09

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

August 4, 2010 8:55:52 AM

Page 1

Work Order ID: 61009



Parent Item: D4149-1



Parent Item Name: Crosstube Lug Plate, Aft


Start Date: 8/04/10

Required Date: 8/11/10

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP Rev:A 10.06.24 new issue DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304S11GA  304/316 0.125 Sheet		Purchased	No			100	sf	91.2982	0.1355	1.426316	1.5	13-10-9-8	

Location

Loc Qty

Loc Code

MAT

91.2982

114488

1.5259

114799

89.7723

114799

11

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:
Description: <u>CROSSTUBE Lug PLATE. AFT</u>		Part Number: <u>4149-1</u>
Inspection Dwg: <u>D4149-1</u> Rev: <u>B</u>		Page 1 of 1

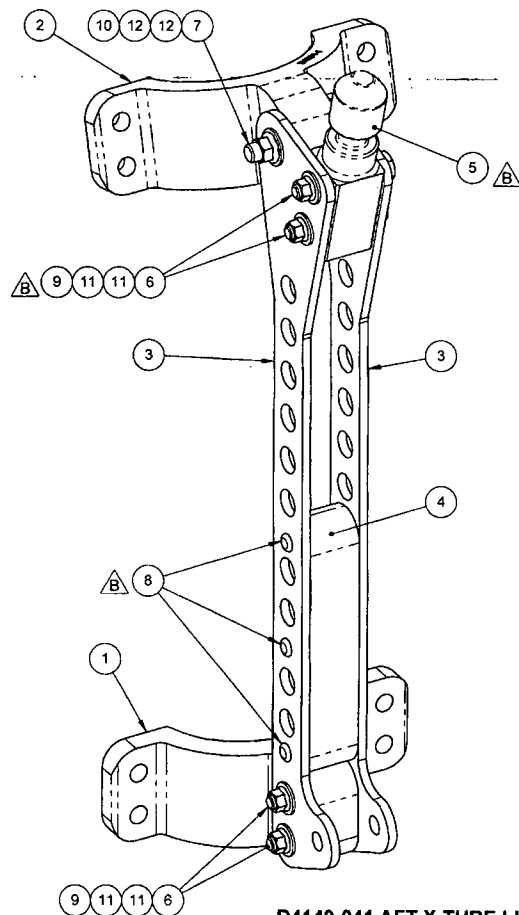
FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø .129	+ .005 - .001	.131	*		V PB 03	
Ø .191	+ .005 - .001	.192	*		V	
Ø .257	+ .006 - .001	.255	*		V	
Ø .38	+ .006 - .001	.379	*		V	
.310	± .010	.311	*		V	
.386	± .010	.380	*		V	
.750	± .010	.750	*		V	
.469	± .010	.471	*		V	
3.25	± .030	3.250	*		V	
.65	± .030	.653	*		V	
.63	± .030	.624	*		V	
5.46	± .030	5.460	*		V	
3.80	± .030	3.801	*		V	
2.13	± .030	2.131	*		V	
1.313	± .010	1.313	*		V	
.375	± .010	.373	*		V	
.625	± .010	.625	*		V	
1.175	± .010	1.173	*		V	
.752	± .010	.754	*		V	
1.588	± .010	1.589	*		V	
1.587	± .010	1.587	*		V	
.750	± .010	.760	*		V	
1.55	± .030	1.555	*		V	
1.125	± .010	1.119	*		V	

Measured by: <u>PB</u>	Audited by: <u>S</u>	Prototype Approval: <u>N/A</u>
Date: <u>10-8-9</u>	Date: <u>10/08/09</u>	Date: <u>N/A</u>

Rev	Date	Change	Revised by	Approved
A		New Issue	KJ/JLM	



D4149-041 AFT X-TUBE LUG ASSY

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4149-041" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 2.17 lbs

ITEM	QTY -041	P/N	DESCRIPTION
	X	D4149-041	AFT X-TUBE LUG ASSY
1	1	D3910-1	X-TUBE LUG
2	1	D4091-1	MOUNTING LUG
3	2	D4149-1	AFT X-TUBE LUG PLATE
4	1	D4149-3	SPACER
5	1	D4149-5	EYEBOLT STUD
6	4	AN3C12A	
7	1	AN4C13A	BOLT
8	3	MS20615-4M18	RIVET
9	4	MS21043-3	NUT
10	1	MS21043-4	NUT
11	8	NAS1149C0332R	WASHER
12	2	NAS1149C0432R	WASHER

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. *610099*
B-110-8-04

RELEASED
2010-07-16
MP

B	MS20615-4M18 WAS MS20615-4M20 (ZN D3-1 & B7-2); ADDED D4149-5 (SHT 5); D4149-5 WAS D3909-5 (ZN D3-1 & D7-2); REPLACED QTY(3) MS20615-4M18 WITH QTY(2) EACH AN3C12A, MS21043-3 AND QTY(4) NAS1149C0332R WASHER (ZN D3-1, C7-1, B7-2 & B3-2); Ø0.191 2 PL REPLACES Ø0.129 3 PL (ZN D8-3) REASON: SEE TR-D350-607-2 REV. B.	MB	10.07.05
A	NEW ISSUE	MB	10.06.18
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>1</i>		
DRAWN	<i>1</i>		
CHECKED	<i>1</i>		
MFG. APPR.	<i>1</i>		
APPROVED	<i>1</i>		
DE APPR.	<i>1</i>		
DATE	10.07.05		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D4149 REV. B SHEET 1 OF 5 TITLE AFT X-TUBE LUG ASSY SCALE NTS <small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSES OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

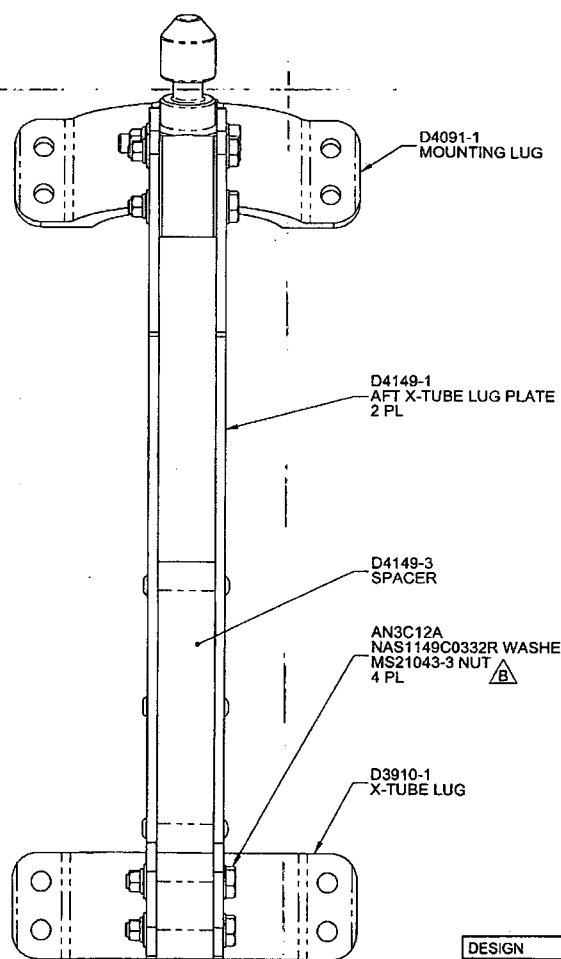
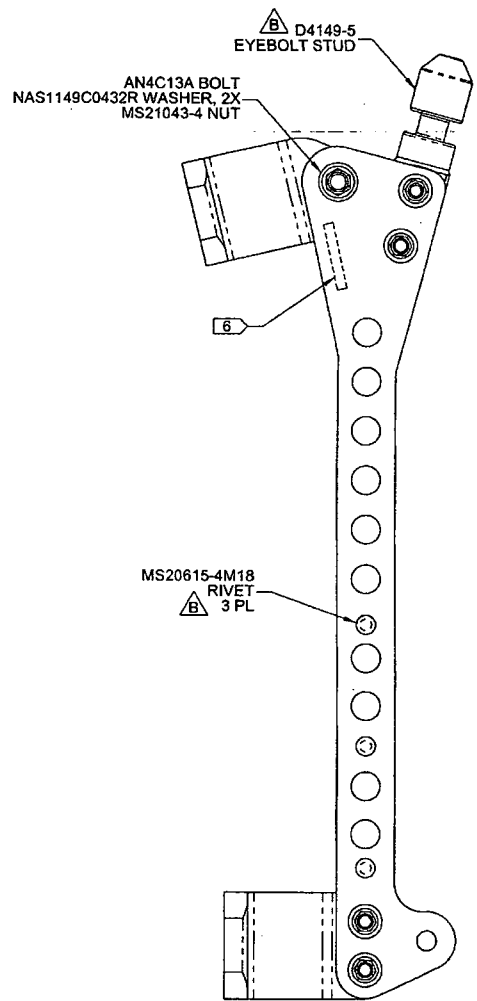
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8 7 6 5 4 3 2

D
C
B
A



w/o 4009

RELEASED
2010-07-16
MP

D4149-041 AFT X-TUBE LUG ASSY

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D4149	SHEET 2 OF 5
APPROVED		TITLE	SCALE
DE APPR.		AFT X-TUBE LUG ASSY	NTS
DATE	10.07.05	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

8 7 6 5 4 3 2

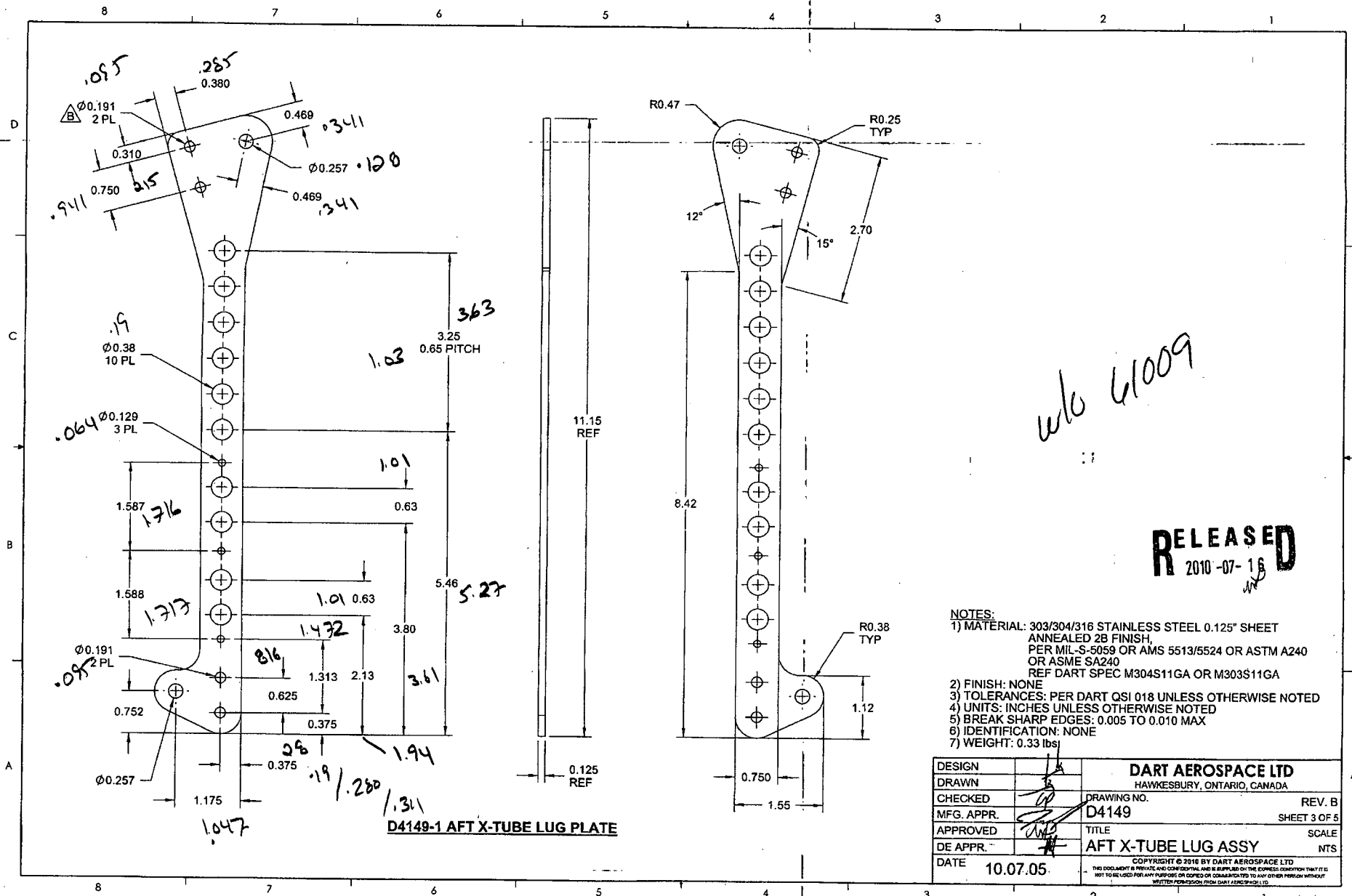
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



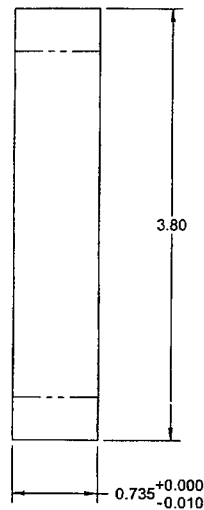
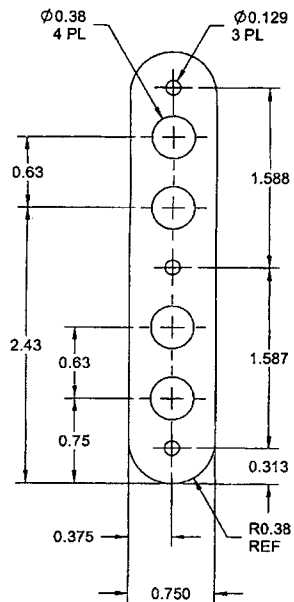
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

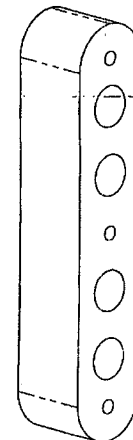
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4149-3 SPACER



W/O 41609

RELEASED
2010-07-16
JW

NOTES:

- 1) MATERIAL: 303/304/316 STAINLESS STEEL BAR PER ASTM A276 OR A582
REF DART SPEC MS304B OR MS303B
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.47 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO. D4149	REV. B
MFG. APPR.		TITLE	SHEET 4 OF 5
APPROVED		AFT X-TUBE LUG ASSY	SCALE
DE APPR.			NTS
DATE	10.07.05	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

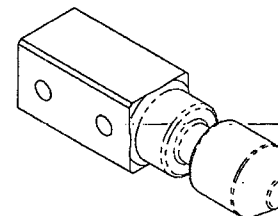
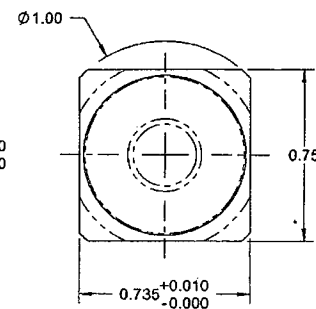
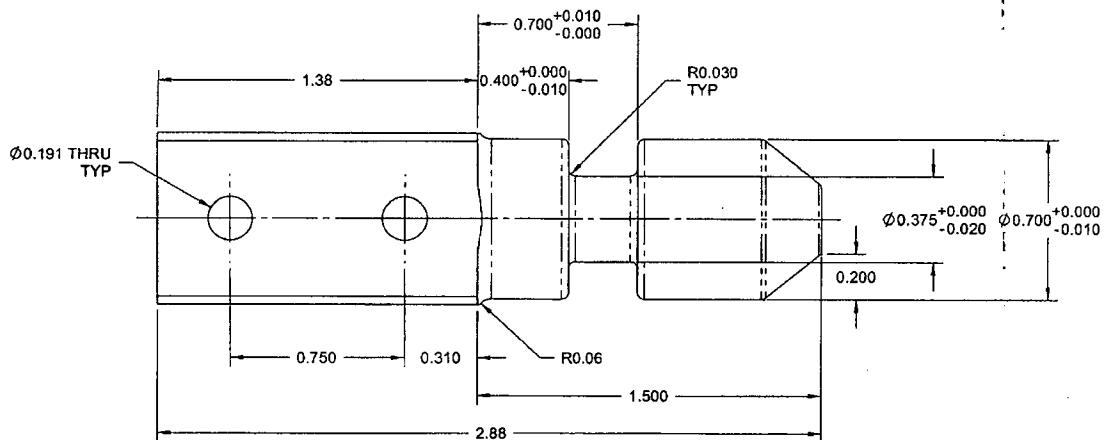
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



D4149-5 EYEBOLT STUD

w/o 61009

RELEASED
2010-07-16

NOTES:

- 1) MATERIAL: 303/304/316 STAINLESS STEEL BAR PER ASTM A276 OR A582
REF DART SPEC MS304B OR MS303B
- 2) FINISH: NONE
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4149-5" USING FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.33 lbs

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO. D4149	REV. B
MFG. APPR.		SHEET 5 OF 5	
APPROVED		TITLE	SCALE
DE APPR.		AFT X-TUBE LUG ASSY	NTS
DATE	10.07.05	<small>COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

W/O:		WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector		

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)							
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector	
			Initial Chief Eng	Action Description Chief Eng	Sign & Date				

NOTE: Date & initial all entries